Claims:

1. A cylindrical separator for cylindrical cells, comprising a cylindrical body constituted by a layered structure of a plurality of turns of at least a non-woven sheet material wound around a mandrel, and a bottom part closing a first end of said cylindrical body, wherein said bottom part being formed from the extension of said cylindrical body when being rotated in a wetted state, and fused by a heated die, **characterized in** that said wetted state is provided by the spraying of a predetermined amount of liquid, and said folding is provided by a gradual deformation in said rotating state proceeding from the edge towards the central zone by moving said rotating body along a stationary forming groove profiled gradually to the required shape of said bottom part, wherein a support is provided at the interior of said body having a support surface defining said required shape and said supporting surface and said profiled groove defining together a narrow space for said bottom part.

2. The cylindrical separator as claimed in claim 1, wherein said cylindrical body being made from a plurality of sheets placed onto one another and wound together.

3. The cylindrical separator as claimed in claim 2, wherein said sheets comprise at least one layer of a semi-permeable membrane and cellophane in addition to said non-woven sheet material.

4. The cylindrical separator as claimed in claim 1, wherein said turns being not affixed to each other.

5. The cylindrical separator as claimed in claim 1, comprising a thermoplastic sealant arranged at the central zone on the outside of said bottom part.

6. The cylindrical separator as claimed in claim 1, wherein said bottom part being pressed during heat drying and fusing before insertion into the cell.

7. A method for making the cylindrical separator closed at the bottom, for batteries with a hollow cylindrical interior, comprising the steps of:

- providing a sheet separator material of predetermined length and width, wherein the width being at least as long as the length of the cylindrical portion of the separator plus and extended portion being at least as long as the half diameter of the separator;

- winding said sheet material around a mandrel by rotating said mandrel, wherein said mandrel extending till the end of said cylindrical portion of the separator and having a head portion at the lower end shaped to define the required profile of said closed bottom part;

- supporting the outside of the winding by means of a stationary winding nest;

- applying a predetermined amount of water to said extended portion during any of the foregoing steps to soften said sheet material at the extended portion;

- guiding said rotating mandrel and separator when placed in said winding nest above a stationary rail provided with a forming groove with varying profile so that said extending portion is engaged in said groove that has a profile conforming to that of said head portion to gradually fold said wetted extended portion from the edge towards the central zone and to close thereby the bottom part of said separator;

- causing said mandrel and said separator to stop rotation;

- drying and fusing said wet closed bottom part by the application of heat and a predetermined pressure; and

- introducing said separator into the cylindrical cavity of a semi-finished cell from said winding nest by pushing said closed bottom portion of the separator by means of axial movement of said mandrel; and

- withdrawing said mandrel from the interior of said separator.

8. The method as claimed in claim 7, wherein at least two sheet materials placed on one another being wound during said winding step.

9. The method as claimed in claim 7, wherein said water application step being carried out prior to said winding step.

10. The method as claimed in claim 8, wherein the second sheet being a semi-permeable membrane.

11. The method as claimed in claim 7, further comprising the step of slightly pressing said rotating separator on said mandrel from the outside by a belt moved with the required peripheral speed of the rotating separator through the whole period of rotation.

12. The method as claimed in claim 7, wherein said drying and fusing step being carried out by a heated die shaped to the required profile of said separator bottom portion.

13. The method as claimed in claim 7, further comprising the step of applying a thermoplastic sealant of predetermined volume on the central zone of said bottom portion following said drying and fusing step and prior to said introduction step.

14. The method as claimed in claim 7, wherein said mandrel comprising a sleeve and a pin therein, said head portion being provided on said pin, and said sleeve defining a recess for receiving said head portion.

15. The method as claimed in claim 14, wherein during said withdrawing step said sleeve being withdrawn first followed by withdrawal of said pin.

16. The method as claimed in claim 7, wherein all of said steps being synchronized with a cell manufacturing line.